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Horticulture Research

Whole Farm Financial Project: Analysis of 2013 - 2016 Financials

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Cooperators:
- **8 PFI Fruit and Vegetable Producers**

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In a Nutshell

- Eight fruit and vegetable farms provided a profit-loss statement and simple balance sheet for four years (2013 - 2016).
- Five of the farms averaged more than $24,000/ac in gross revenue for the 4-year period.
- Four of the farms had a "favorable" four-year average net income ratio, ranging from 0.23 - 0.43.
- Number of years farming as a business ranged from 2 – 14 years.
- No two farm financial strategies or situations are the same. This report serves as a starting point for profitability conversations, and for farmers to compare their own numbers with their peers.

Introduction

In 2014 vegetable farmers asked Practical Farmers to collect and anonymously report whole farm financial data from themselves and their peers. Participating farms had a shared concern that attention to the bottom line of the local food movement was not receiving enough attention – that too many aspiring farmers had unrealistic or naïve expectations for profitability and a farming lifestyle. The results from the four years of this study are intended to be a resource for aspiring and beginning farmers, to provide a snapshot of what financials look like for real farms and how they can vary from year to year.

Though many new farmers start because of a love of growing vegetables and feeding communities, without a basic understanding of financials their farm businesses will not be sustainable. If a person is ready to start a farm, they need to be ready to do the books.

This report cannot be used as a blueprint for farm financial success. This report will be immediately useful to farmers with a few years of financial numbers of their own to compare. For beginning and aspiring farmers, this report can show them which ratios to begin tracking, and what level of revenue, and costs, may be reasonable to expect.

When deciding the methods for this project, several previous reports were used, and may be of interest to other farmers and researchers. Farmer members have found Hendrickson (2005) particularly informative for farm business comparison. Several reports from Iowa State University were employed to evaluate farm business health (Chase, 2012; Plastina et al., 2014; Edwards, 2014), as well as reports from other universities (Blonde, 2009), Practical Farmers of Iowa (1999) and "Fearless Farm Finances" by Padgham et al. (2012).

Data Collection and Reporting

This report provides a 4-year look at financials from eight farms from 2013 – 2016. Though more farmers participated through 2013 and 2014, only farms that provided at least three years of data are included in the 4-year report. Detailed Whole Farm Financial Reports for 2013 and 2014 are available on the Practical Farmers of Iowa website, practicalfarmers.org (Kolbe, 2015; Kolbe, 2016).

For this report, farmers were asked to complete a Schedule F tax form that was modified to include a more detailed breakdown of revenue, a simple balance sheet of equity and liabilities, and a 13-question survey (**Appendix 1**). To preserve anonymity of the farms, the data is primarily reported by transforming data into common financial ratios and per acre values.

Overview of participating farms

Farmers were asked to participate not based on their perceived profitability, but by their willingness to share data for the benefit of others. The farms all raise a diverse set of fruits and vegetables. Beyond that, they differ in many ways: some also raise livestock or field crops. Some farm on their own, while others farm with a spouse or family. Some have been farming only a few years, others are seasoned veterans. On the financial side, four are sole proprietorships, four are LLCs. Three farms' financials are organized so their house is included in the farm assets. Some started their farms slowly, easing in after prior careers or during existing careers; some others are all-in, living on the farm's income while building the farm for their first career.

Three farms earned 100% of their household income from the farm during 2015 and 2016; one additional farm in the study has a goal of earning 100% of household income from farming, but is a beginning farmer and is meeting their current expectations for profitability.

Farm Ratios

No single financial ratio explains the overall financial health of a business, but tracking a group of ratios can help expose weaknesses and strengths in a farm business. Over time, ratios and benchmarks can be used to set goals that drive short-term

financial decision-making. Nine ratios and benchmarks were used in the single-year Whole Farm Financial Project reports (Kolbe, 2015 and Kolbe, 2016), but for this summary, only net income ratio and rate of return on farm assets are included.[1] These ratios are shown in Columns 9 and 10 of **Table 1** and Columns 10 and 11 of **Table 2**.

2013 - 2016 Averages and Ranges

Table 1 shows each farm's four-year average value for the selected categories, and the range of the values each farm experienced during the four years (difference in high and low annual values). The farms are identified by the letters on the left-side of the table, and are consistent throughout the report. Columns 1-4 are related to revenue, 5-7 to expenses, and 8-10 to returns. (Farm letters are also consistent across the 2013 and 2014 Whole Farm Financial Reports (Kolbe, 2014 and Kolbe, 2015). For example, Farm A in the 2013 report is the same farm as Farm A in this report.)

Revenue

The first four columns of **Table 1** shows averages and ranges of components of the farms' revenue, including the number of marketing channels they use (farmers market, CSA, restaurants, etc), their sales concentration, produce as a percent of total revenue, and gross revenue per acre. Most of the farms used an average of four marketing channels, and all the farms sold over 70% of their produce in two marketing channels; half of the farms sold over 90% of their produce in their top two marketing channels. Most of the farms did not add or remove more than two marketing channels during the four-year period. This does not capture smaller changes in marketing within their markets. For example, a farm may have added customization to their CSA, online ordering for restaurants, or more accounts – those changes were not captured in the survey.

Seven of the eight farms earned more than 79-100% of their total farm income from fruits and vegetables, on average during the four years. Average gross revenue per acre during the four-year period ranged from $4,500 to $32,000 (Farm E had much lower revenue per acre, but most of their production acreage is not in fruits and vegetables). Five of the farms averaged more than $24,000/ac in gross revenue for the 4-year period.

Revenue per acre on vegetable farms is typically much higher than revenue per acre for field crops, but can also vary greatly depending on year, and does not have as many options for subsidized insurance as commodities. The Whole Farm Revenue Protection Program is the only option for vegetable farmers outside the Noninsured Crop Disaster Assistance Program (USDA, 2017). Some of the variation seen in the range values of **Tables 1 and 2** is due to farm growth of beginning farms, but some is due to under-performing crop years, health issues, or a planned scale-back to meet different farm goals. Annual variation in gross revenue is not necessarily bad, only unplanned (and unmanageable) variation is problematic.

Expenses

Columns 5, 6 and 7 in **Table 1** highlight the percent of total farm expenses allocated to labor, supplies and depreciation. Based on each farm's Schedule F, these categories tended to be the highest for most farms, and highly variable among the farms. Average percent of total expenses for labor varied from around 30% at five farms to 0% or 3% at the other three farms. Depreciation also differed by farm, with two farms spending a four-year average of 22% of their expenses on depreciation while others were under 10%. By farm, depreciation could vary widely year-to-year, which is reflected in the range portion of **Table 1** and is more visible in **Table 2**. Some farms had annual changes of 30% in the portion of their budget allocated to depreciation during the four years. Because depreciation can be scheduled, it is logical for farmers to depreciate when they can. Several of these farms were depreciating high tunnels, packing sheds, tractors, and other farm machinery.

Returns

The final three columns in **Table 1** show the balance of the revenue and expenses; the net returns to the farmer. Columns 8, 9 and 10 show the net farm profit per acre and two measures of

Table 1

Comparison of Financials by Farm, 2013-2016

Farm	Revenue				Expenses			Returns		
	Number of produce market types used	% produce sales in top 2 markets	produce % of total farm revenue	Gross Revenue Per Acre ($)	Labor expense % of total	Supplies expense % of total	Depreciation expense % of total	Net Farm Profit per acre ($)	Net Income Ratio [a]	Rate of Return on Farm Assets [b]
	1	2	3	4	5	6	7	8	9	10
2013-2016 Average										
A	5	91	92	24,689	31	11	5	12,619	0.43	0.28
B	4	87	91	32,081	34	9	17	7,496	0.23	0.16
C	4	95	79	3,047	30	4	9	237	0.07	0.07
D	4	85	96	4,577	30	13	22	(82)	(0.07)	0.03
E [c]	3	90	35	729	0	4	12	(87)	(0.12)	0.01
F	4	80	88	31,700	19	20	9	6,787	0.26	0.47
M	3	94	100	26,166	32	14	7	7,472	0.33	0.35
N [c]	6	71	98	24,152	3	16	22	199	0.05	0.05
2013-2016 Range										
A	1	9	4	3,526	4	1	1	3,431	**0.40**	**0.32**
B	2	4	9	15,903	31	5	32	8,727	**0.16**	**0.11**
C	3	11	17	479	14	4	4	375	**0.13**	**0.10**
D	2	9	8	5,017	12	4	18	2,274	**0.41**	**0.13**
E	1	7	12	127	0	2	2	47	**0.08**	**0.02**
F	1	15	24	32,067	32	13	38	12,117	**0.40**	**0.87**
M	1	12	0	18,805	7	15	12	10,663	**0.50**	**0.67**
N	2	16	5	6,838	4	4	7	5,339	**0.12**	**0.29**

[a] Net Income Ratio = net income ÷ gross revenue
[b] Rate of Return on Farm Assets = (net farm income + other interest expense + mortgage interest expense) ÷ total farm assets
[c] Farm N did not provide financials in 2013; Farm E did not provide financials in 2014.

Average values for Net Income Ratio and Rate of Return on Farm Assets are shown in green, blue or red. These values indicate "favorable" (green), "moderate (blue), or unfavorable (red), based on Blonde (2009).

[1] Rate of return on farm assets = (net farm income + other interest expense + mortgage interest expense) / total farm assets
Net income ratio = net income / gross revenue

profitability. Green values indicate "favorable" ratios; blue values are "moderate" ratios, and red values are "unfavorable."[2] Average net farm profit per acre varied among farms, reaching as high as an average of $12,619/acre while other farms averaged a net loss over the four years. Four of the farms averaged net profits greater than $6,000/ac. All farms, however, had average rates of return on farm assets that were "moderate" or "favorable," indicating that high depreciation or interest expenses may have affected their net income during some or all of the 2013-2016 years.

For the 4-year average net income ratio, four of the farms (Farms A, B, F, M) had "favorable" ratios, ranging from 0.23 - 0.43. The other four farms had "unfavorable" ratios, under 0.14, shown in red text. In the last four years, three of those farms (D, E, N) answered that they were not currently meeting their expectations for farm profitability, but all are making changes to their business plan to better meet those goals.

All eight farms' four-year average rate of return on farm assets were positive, ranging from 0.01 to 0.43. Farms with lower total asset values will be able to more quickly achieve a higher rate of return on those assets. Typically, any value over 0.05 is considered strong in this category. This is a good reflection of the relatively low start-up cost for diversified vegetable operations compared to field crops or large-scale livestock.

It is important to note, again, that these farms are not implementing a standard business model, nor do they do their bookwork the same way, or have the same financial goals for the year or the future. For example, some farms pay themselves a salary categorized on the Schedule F as farm labor, while others use the net as their income. Some farmers are re-investing in capital for the farm and are not as concerned with earning income from the farm right now. As long as the farmer is aware of why the numbers look the way they do, have a financial goal and plan, they can evaluate their progress and the financial health of their farm.

Analysis by Farm

The most critical take-aways from this four-year summary are: 1. There is no single correct business model for a successful farm; 2. Farmers should expect some un-planned variation in their year-to-year financials, and be prepared to weather a lean year (or several); and 3. Being knowledgeable about farm financials, tracking progress toward financial goals is necessary for a sustainable farm.

Table 2 shows selected financial characteristics, by farm, for each year from 2013 - 2016 and the 4-year average for the farm. In addition to providing the revenue, expense, and return categories used in **Table 1**, **Table 2** also includes some demographic and financial strategy information about the farmers.

Four of the farms, Farms A, B, D and E, represent the more experienced farmers in the group, though they are just passing the USDA definition of a beginning farmer (10 years). Farm E represents the income goal outlier of this group; they are the only farm of eight farms intentionally achieving a negative net income on their farm business. This strategy allows them to enjoy the farming lifestyle, while using the farm as a financial tool to build equity and wealth while supporting themselves with off-farm income.

Farms A, B and D report a financial goal of earning 50-100% of their household income from the farm. Of these three farms, Farm A has the most consistent financials. This could be because they successfully control their expenses, creating a safe buffer for net income each year. Though they did not always meet their goal for percent fo household income, they reported that they were meeting their expectations for profitability each year. For Farm A, 2014 was a lean year, with lower revenue and a lower, but still stable, net income ratio. Farm A said,

> *"I'm pretty comfortable with our workload, our product quality and our income. But it hasn't always been that way, for sure. When we started our farm, if our numbers had been in this table, they would have looked pretty bad for a few years. I'm sure we can still improve more and earn more income, but I think from now on the gains will be more incremental - the easy gains have been made.*
>
> *I think people should make money farming. If farmers have a realistic plan, are well-organized and efficient in production and harvesting, they should make money. If they are not well-organized and efficient - they won't be successful."*

Farm A noted labor efficiency can be something that sets well-managed farms apart from those making marginal income. They recommend looking into specific enterprise numbers, like net income per CSA box and labor hours per CSA box (or a similar measure for restaurant or farmers market sales).

Farm B made a substantial change part-way through the four-year period, going from a goal of 50% of their household income from the farm to seeking 100% of their household income from the farm. During that transition, they spent more money on labor, but earned more gross revenue and net income per acre. They did not feel they were meeting their profitability goals from 2013-2015, but in 2016 felt they had done so. Even after 12 years of farming, there are still adjustments and improvements to be made. Vegetable farming, especially when direct-marketing, is not a static occupation. Like Farm A, Farm B consistently achieved "favorable" and "stable" benchmark values for the rate of return on their farm assets and their net income ratio, while earning an average of $7,496 in net per acre. They did, however, experience a large net income change, netting $3,314/acre in 2013 to $12,041/ac in 2016.

Farm D also made changes to their business during the 4-year period, reducing their planted acreage by half. They reported that they were not meeting their profitability goals during any of the years of the study. On average, the farm net income ratio was -0.07, spurred low by rough fiscal years in 2015 and 2016, during which the farmer noted their labor costs were too high, and adding a new high tunnel contributed to both labor cost and other expenses. They plan to work to increase yield from the farm at its current size (3.2 acres in fruits and vegetables). The farmer did take an owner's draw from the business in addition to the net farm income, which represents the current percent of household income from the farm in each year. Farm D also had a consistently high proportion of their expenses dedicated to depreciation expenses (22%), indicating that they were investing in capital and equipment for the farm.

Farms C, F, M and N are all beginning farmers, entering the study during their second or third years of farming. Each of these farms increased their acreage of fruits and vegetables during the study, but neither their growth in acres, gross revenue or net income increased steadily or consistently by year, or in predictable ways, if one is only looking at the numbers.

Farms C and N, for example, both increased their acreage of fruits and vegetables, but at least of some of the expansion was for perennial fruits which take several years to mature before bearing fruit - or revenue. Farm C had a majority of their acres in tree fruit

[2] This ranking system was developed based on "strong," "stable," and "weak" benchmark values in Kohl and Blonde, 2009.

Table 2

Selected Farm Financials and Demographics, 2013-2016

Year	Demographics				Revenue		Expenses			Returns			Goals		
	Number of Years Farming	Acres in fruit and vegetables	Number of produce market types used	% of produce sales in top 2 markets	produce % of total farm revenue	Gross Revenue Per Acre ($)	Labor expense % of total	Supplies expense % of total	Depreciation expense % of total	Net Farm Profit per acre ($)	Rate of Return on Farm Assets [b]	Net Income Ratio [a]	Goal % household income from farming	Current % household income from farming	Are you meeting your expectations for farm profitability?
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Farm A															
Average		2.93	4.5	91	92	24,689	31	11	5	12,619	0.28	0.43	71	66	
2013	9	2.7	4	87	94	24,205	33	11	6	12,240	0.17	0.51	80	82	Yes
2014	10	3.0	4	90	90	22,876	30	12	5	11,248	0.49	0.16	80	55	Yes
2015	11	3.0	5	94	90	26,402	29	11	4	14,679	0.26	0.56	75	82	Yes
2016	12	3.0	5	96	91	25,272	30	11	4	12,309	0.19	0.49	50	47	Yes
Farm B															
Average		3.75	3.75	87	91	32,081	34	9	17	7,496	0.16	0.23	75	72	
2013	9	3.0	3	87	88	23,466	20	9	35	3,314	0.13	0.14	50	41	No
2014	10	4.0	3	88	87	30,191	22	11	18	7,055	0.23	0.26	50	45	No
2015	11	4.0	4	88	96	35,297	42	8	13	7,573	0.13	0.21	100	100	No
2016	12	4.0	5	85	95	39,369	51	6	4	12,041	0.15	0.31	100	100	Yes
Farm C [c]															
Average		17.38	3.5	95	79	3,047	30	4	9	237	0.07	0.07	100	100	
2013	3	17.0	2	100	69	2,805	22	7	7	372	0.11	0.13	100	100	Yes
2014	4	16.5	3	98	74	3,020	27	3	9	255	0.08	0.06	100	100	Yes
2015	5	18.0	4	89	85	3,081	36	3	11	321	0.06	0.10	100	100	Yes
2016	6	18.0	5	93	87	3,284	35	2	10	(3)	0.01	0.00	100	100	Yes
FARM D															
Average		4.73	4	85	96	4,577	30	13	22	(82)	0.03	(0.07)	75	48	
2013	11	6.0	3	86	92	8,299	30	11	32	925	0.02	0.11	75	40	No
2014	12	6.5	3	89	92	3,282	25	15	18	371	0.11	0.01	75	45	No
2015	13	3.2	5	79	100	3,433	37	13	14	(274)	-0.01	(0.08)	75	55	No
2016	14	3.2	5	85	100	3,295	28	11	24	(1,349)	-0.02	(0.30)	75	50	No
FARM E															
Average		0.53	3.33	90	35	729	0	4	12	(87)	0.01	(0.12)	(5)	(7)	
2013	9	1.0	3	85	41	804	0	3	14	(60)	0.02	(0.07)	0	0	Yes
2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2015	11	0.3	3	92	29	704	0	5	12	(107)	0.00	(0.15)	0	0	Yes
2016	12	0.3	4	92	35	677	0	3	11	(94)	0.00	(0.14)	(15)	(21)	No
FARM F															
Average		0.94	3.75	80	88	31,700	19	20	9	6,787	0.47	0.26	91	18	
2013	3	0.75	3	90	76	25,421	0	18	38	1,327	0.05	0.05	100	0	No
2014	4	1.00	4	79	93	19,760	19	25	0	2,310	0.12	0.07	65	9	No
2015	5	0.75	4	75	85	51,827	23	12	0	23,400	0.92	0.45	100	35	Yes
2016	6	1.25	4	78	100	29,790	32	25	0	13,444	0.80	0.45	100	27	Yes

[a] Net Income Ratio = net income ÷ gross revenue

[b] Rate of Return on Farm Assets = (net farm income + other interest expense + mortgage interest expense) ÷ total farm assets

[c] Farm N did not provide financials in 2013; Farm E did not provide financials in 2014.

Average values for Net Income Ratio and Rate of Return on Farm Assets are shown in green, blue or red. These values indicate "favorable" (green), "moderate (blue), or unfavorable (red), based on Blonde (2009).

Table 2, cont.

Selected Farm Financials and Demographics, 2013-2016

Year	Demographics				Revenue		Expenses			Returns			Goals		
	Number of Years Farming	Acres in fruit and vegetables	Number of produce market types used	% of produce sales in top 2 markets	produce % of total farm revenue	Gross Revenue Per Acre ($)	Labor expense % of total	Supplies expense % of total	Depreciation expense % of total	Net Farm Profit per acre ($)	Rate of Return on Farm Assets [b]	Net Income Ratio [a]	Goal % household income from farming	Current % household income from farming	Are you meeting your expectations for farm profitability?
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
FARM M															
Average		3.0	2.75	94	100	26,166	32	14	7	7,472	0.35	0.33	100	100	
2013	3	2.0	3	88	100	34,097	34	24	3	13,104	0.75	0.38	100	100	Yes
2014	4	2.0	2	100	100	31,100	34	16	4	11,110	0.36	0.63	100	100	Yes
2015	5	3.0	3	93	100	24,178	32	9	5	3,233	0.22	0.13	100	100	No
2016	6	5.0	3	97	100	15,292	28	9	15	2,441	0.07	0.16	100	100	Yes
FARM N [c]															
Average		4.33	5.67	71	98	24,152	3	16	22	199	0.05	0.05	50	5	
2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2014	2	3.0	5	81	100	27,626	0	13	19	(3,126)	-0.11	-0.02	50	0	No
2015	3	4.0	5	65	95	24,042	4	17	25	1,509	0.10	0.06	50	5	No
2016	4	6.0	7	67	99	20,788	4	17	20	2,213	0.18	0.11	50	10	No

[a] Net Income Ratio = net income ÷ gross revenue
[b] Rate of Return on Farm Assets = (net farm income + other interest expense + mortgage interest expense) ÷ total farm assets
[c] Farm N did not provide financials in 2013; Farm E did not provide financials in 2014.

Average values for Net Income Ratio and Rate of Return on Farm Assets are shown in green, blue or red. These values indicate "favorable" (green), "moderate (blue), or unfavorable (red), based on Blonde (2009).

crops, which is reflected in their gross sales per acre being on the lower end of the spectrum, averaging $3,047/ac. Like several other farms, they aimed to keep their farm just in the black for tax purposes. However, they also organized their business so they pay themselves an annual salary, which is captured in their labor expenses. This salary provides 100% of their household income, which accounted for an average of 30% of their farm expense over the four years of the study.

Farm N is rapidly re-investing money in their business and depreciating at a high rate; 22% of their expenses on the books are depreciation during the three years they participated in the study. During this time, Farm N spent very little on labor, and in 2016 had more distinct marketing channels than any other farm in the study (7). Farm C and Farm N's net income ratios might make some nervous, but both farms are sticking to a financial plan and are ensuring the rates of return on their farm assets remain strong.

Farms F and M are both beginning farmers with nearly all of their farm income from fruit and vegetables sales. Farm M relies heavily on CSA, which has provided an early-season cash flow each year. Farm M kept their depreciation expenses very low for the first few years, allowing themselves to draw an income, but also because their land access at the current site was not assured. In 2016 Farm M moved to a new location (losing the lease accounted for some of the profitability declines in 2015) and expanded their production from 3 acres to 5 acres. This reduced their gross revenue per acre and net income per acre. However, the expansion year (2016) had nearly the same level of expenses, only increasing $2,000 from 2015. In 2016, expenses on depreciation and insurance increased as the farm invested in capital assets, but labor expenses were reduced, supplies, seeds and plants expenses stayed nearly flat, and rental equipment was eliminated.

Farm F took a cautious financial approach to their farm. They wanted to remain debt-free, always paying cash from the farm operating budget, and never owing money to a third party. Farm F had the lowest total assets of any farm, and never during the four-year study had any liabilities on their balance sheet. Farm F said,

> *"I often say, 'that's a lot of beets.' Meaning, it takes a lot of beets to come up with $20,000 to pay back a debt. I don't want to owe a third-party entitiy money. That's just how I live my life; I want to be self-sufficient. Maybe I'm a little idealistic about it, but I'd rather the farm owe money to me than to someone else."*

Intending to earn a little more profit each year, with low (but realistic) expectations in the first few years, Farm F planned for $0 profit in 2014 (their fourth year of farming), and surpassed that goal. Their main measure of farm financial sustainability, however, is being able to live off the farm income for six months of the year. "Even if I don't meet my net profit goal, I am still meeting this lifestyle goal," they said. Every year since 2014, Farm F has achieved this goal. Eventually, Farm F would like to earn 100% of their household income from the farm, and are making plans to achieve this as the farm business matures.

Conclusions

This report, aggregating and analyzing farm financials 2013-2016, is intended to be illustrative and educational for farmers with similar types of operations. Just as no two farms are the same, no

two farmers have the same farm financial goals and strategy. But every farm should have financial goals and plans for their farm business, and a way to track their progress.

Craig Chase, an extension specialist at Iowa State University who has worked extensively with fruit and vegetable farmers, suggests tracking one financial ratio from each category (liquidity, solvency, profitability, efficiency. To begin, he reccomends tracking: the current ratio, debt to asset ratio, rate of return on farm assets, and the balance of the efficiency ratios (operating expense ratio + depreciation expense ratio + interest expense ratio + net income ratio = 100% of gross revenue).

Chase also offers five common profitability problems to watch out for:

• *Capital investments are too high relative to income.*
This will affect the rate of return on farm assets, the asset turnover ratio, and likely the depreciation and interest expense ratios.

• *Depreciation or interest expenses are too high (>10% of gross revenue):*
This will make less cash available for operating expenses and net profit.

• *Operating expenses (especially feed and labor) are too high (>60% of gross revenue):*
This will make less cash available for net profit. Farmers should be mindful of the value of their own labor, however. Too often farmers do not account for their labor when analyzing financials. At times, hiring labor for field work makes more financial sense, as it frees up valuable owner-labor for higher value management tasks.

• *High market value for assets makes adequate returns difficult to achieve:*
This is especially true for land values. Chase recommends keeping land values constant and conservative in the balance sheet to avoid becoming "upside down" if land values decline.

• *Sales prices are too low:*
Ensure that you are receiving a fair price for your work. Enterprise budgets by crop or by market are needed to establish fair prices. Farmers participating in PFI's Cooperators' Program have published enterprise budgets for several crops, the reports for which are available at practicalfarmers.org.

In a 2017 Practical Farmers of Iowa annual conference presentation, Rick Hartmann provided advice to beginning vegetable farmers:

> *"A good, stable vegetable farm business takes the following: very hard work; moderately smart work; consistently good products and services. It takes about 3-5 years to become profitable, and 8-10 years to become stable and self-functioning. Work, learn and seek advice from someone doing what you want to do and who is doing it brilliantly," (Hartmann, 2017).*

More information about farm financials, including many resources about business planning, pricing, and production for fruits and vegetables, livestock and field crops are available at practicalfarmers.org.

References

Blonde, G. 2009. Farm Financial Ratios and Benchmarks. University of Wisconsin Extension, Waupaca County.

Chase, C. 2012. Selected Alternative Agricultural Financial Benchmarks. Iowa State University Extension, Ames, IA.

CSA Farm Economic Analysis. 1999. Practical Farmers of Iowa, Ames, IA.

Edwards, W. 2014. Financial Performance Measures for Iowa Farms. Iowa State University, Ames.

Hartmann, R. 2017. Farm Financial Recordkeeping and Planning. Presentation at Practical Farmers of Iowa Annual Conference. Ames. https://youtu.be/TZZ1DjBHGok (accessed Dec. 1, 2017)

Hendrickson, J. 2005. Grower to grower: Creating a livelihood on a fresh market vegetable farm. University of Wisconsin - CIAS, Madison.

Kolbe, L. 2015. Whole Farm Financial Project Year 1: An analysis of FY2013 financials. Practical Farmers of Iowa Cooperators' Program, Ames, IA. http://bit.ly/pfi_horticulture (accessed Nov. 3, 2017)

Kolbe, L. 2016. Whole Farm Financial Project Year 2: An analysis of FY2014 financials. Practical Farmers of Iowa Cooperators' Program, Ames, IA. http://bit.ly/pfi_horticulture (accessed Nov. 3, 2017)

Padgham, J., P. Dietmann, C. Chase and C. Blanchard. 2012. "Fearless Farm Finances: Farm Financial Management Demystified." Midwest Organic and Sustainable Ed Service.

Plastina, A., A. Johanns. 2017. 2016 Iowa Farm Costs and Returns. Iowa State University, Ames. https://www.extension.iastate.edu/agdm/wholefarm/pdf/c1-10.pdf

Risk Management Agency, USDA. 2017. Federal Crop Insurance Corporation Commodity Year Statistics for 2018-2015. https://prodwebnlb.rma.usda.gov/apps/SummaryofBusiness/ReportGenerator/Results?CY=2018,2017,2016,2015&ST=19&IP=76&ORD=CY,IP,ST&CC=S (accessed Dec. 1, 2017)

USDA. 2017. Whole Farm Revenue Protection Pilot Program. https://www.rma.usda.gov/policies/wfrp.html (accessed Dec. 1, 2017)

PFI Cooperators' Program

PFI's Cooperators' Program gives farmers practical answers to questions they have about on-farm challenges through research, record-keeping, and demonstration projects. The Cooperators' Program began in 1987 with farmers looking to save money through more judicious use of inputs. If you are interested in conducting an on-farm trial contact Stefan Gailans @ 515-232-5661 or stefan@practicalfarmers.org.

Appendix 1

SCHEDULE F
(Form 1040)

Adjusted for PFI Whole Farm Project

Part A: Profit or Loss From Farming

Name of proprietor

Accounting method:
☐ Cash ☐ Accrual

Part I Farm Income

1a	Sales of livestock and other resale items (see instructions)	1a					
b	Cost or other basis of livestock or other items reported on line 1a	1b					
c	Subtract line 1b from line 1a				1c		
2	Sales of livestock, produce, grains, and other products you raised				2		

Category of Sales:

Produce Sales:

Early Season CSA		Restaurant	
Summer CSA		Farmers Market	
Fall/Winter CSA		Wholesale Produce	
		Other	

Other than Produce Sales:

Field Crops	
Hay	
Meat, Eggs, Dairy	
Other	

8	All other farm income	8			
9	Gross income. Add amounts in the right column (lines 1c, 2, 8)	9			

Part II Farm Expenses Do not include personal or living expenses

10	Car and truck expenses	10			23	Pension and profit-sharing plans	23		
11	Chemicals	11			24	Rent or lease (see instructions):			
12	Conservation Expenses	12			a	Vehicles, machinery, equipment	24a		
13	Custom hire (machine work)	13			b	Other (land, animals, etc.)	24b		
14	Depreciation and section 179 expense	14			25	Repairs and maintenance	25		
					26	Seeds and plants	26		
					27	Storage and warehousing	27		
15	Employee benefit programs other than on line 23	15			28	Supplies	28		
					29	Taxes	29		
16	Feed	16			30	Utilities	30		
17	Fertilizers and lime	17			31	Veterinary, breeding, and medicine	31		
18	Freight and trucking	18			32	Other expenses (specify):			
19	Gasoline, fuel, and oil	19			a		32a		
20	Insurance (other than health)	20			b		32b		
21	Interest:				c		32c		
a	Mortgage (paid to banks, etc.)	21a			d		32d		
b	Other	21b			e		32e		
22	Labor hired	22			f		32f		

33	Total expenses. Add lines 10 through 32f	33		
34	Net farm profit or (loss). Subtract line 33 from line 9	34		

Part B: Balance Sheet

	Current (<1 yr)	Intermediate (>1 - 10 yr)	Long-term (>10 yr)
Equity	$	$	$
Liabilities	$	$	$
Assets *(equity + liabilities)*	$	$	$

Are any personal assets included in your farm assets? If so, please explain:
◯ yes ◯ no

Part C: Additional Questions

1. Acres in vegetable production . . ☐ tree fruit / berries . . . ☐

2. Total acres earning income . . . . . ☐

3. Number of years farming as a business. . . . . ☐

4. Goal percent of household income from farming . . . ☐

5. Current percent of household income from farming . ☐

6. Type of farm business (LLC, C-corporation, etc) . . . ☐

7. Estimated hours each owner worked on farm ☐

8. Is owner labor included in farm expenses on Part A? ◯ yes ◯ no

9. Estimated owners draw for living expenses (in addition to net income) $ ☐

10. Are you planning to expand any of the following enterprises?
☐ tree fruit / berries ☐ vegetable ☐ field crops ☐ livestock ☐ hay ☐ other

11. Are you meeting your expectations for farm profitability?
yes ◯
no ◯

12. If you are not meeting your expectations for farm profitability, are you planning to make changes?
yes ◯
no ◯
I am meeting my expectations for farm profitability. ◯

13. Please describe the financial goals for your farm, or attach as a separate document.